

operate in reverse and be open when the electric meter is in a normal operating position, and closed when the electric meter is in the inoperative position.

[0033] The controller 12 may control and/or operate the generator 11 based on communications with the switch 17. For example, the controller 12 may detect when the switch 17 has been opened to prevent the building X from receiving primary utility power 1. The controller 12 may prevent the generator 11 from supplying power to the building X when the switch 17 has been opened. In some forms, the generator 11 may continue to operate even though the controller 12 is preventing the generator 11 from supplying power to the building X when the switch 17 has been opened.

[0034] As discussed above, the controller 12 may prevent the generator 11 from supplying power to the building X in various ways that are known now, or discovered in the future. The controller 12 may prevent the generator 11 from starting when the controller 12 detects the switch 17 has been opened. In some forms, the controller 12 may shut down the generator 11 when the controller 12 detects the switch 17 has been opened.

[0035] In one example, the switch 17 is an electric meter and the controller 12 prevents operation of the generator 11 when the electric meter has been manipulated by a user U to prevent the building X from receiving utility power from the utility power source 1. One example scenario for opening the switch 17 would be where rescue personnel open the switch 17 when arriving on the scene when fire 15 is detected in the building X.

[0036] Another example scenario for opening the switch 17 would be where an electrician pulls the switch 17 to perform maintenance within the building X. When the electrician cuts utility power, a conventional controller may command a generator to begin supplying power to the building X. Therefore, the electrician may undesirably be working in areas of the building X that are now supplied with power by the generator even though the electrician believes power has been cut to the building X. The power management system 10 may prevent individuals from operating in the building X under the misperception that all power has been cut to the building X by preventing the generator 11 from supplying power.

[0037] Any type of switch 17 that is known now, or discovered in the future, may be included in the example power generation systems 10 described herein. The type of switch 17 that is included in the secondary power generation system 10 may depend in part on cost and/or the application where the secondary power generation system 10 will be used.

[0038] FIG. 4 is a schematic view illustrating the example secondary power generation system 10 shown in FIG. 3 where the controller 12 is a generator controller 12 that selectively operates and protects the generator 11. In some forms, the controller 12 may be included in other components that form the power management system 10.

[0039] FIG. 5 shows an example form of the power management system 10 where the controller 12 opens a switch 18 that prevents the generator 11 from supplying power to the building X. In other various forms, the controller 12, or some other type of electronic component, may command some other type of electronic component that is known now, or discovered in the future, to prevent the generator 11 from supplying power to the building X.

[0040] In some forms, the controller 12 may be configured to receive an override command that allows the generator 11 to supply power even when the switch 17 has been opened.

There may be situations where it is desirable to supply power from the generator 11 even when the switch 17 is open.

[0041] FIG. 6 shows an example secondary power generation system 10 that further includes a programmable interface module 30 that exchanges signals with the sensors 13A, 13B, 13C, 13D and the generator controller 12. In some forms, the programmable interface module 30 includes a sensor circuit (not shown) that converts an input signal received from the sensors 13A, 13B, 13C, 13D for delivery to the generator controller 12.

[0042] The programmable interface module 30 exchanges data with the generator controller 12 relating to the presence of fire in an environment where the sensors 13A, 13B, 13C, 13D are located. In some forms, the programmable interface module 30 may be adapted to be located outside or inside the building X to receive signals from the sensors 13A, 13B, 13C, 13D. The programmable interface module 30 may receive signals (i) from the sensors 13A, 13B, 13C, 13D indicating the presence of fire; and/or (ii) indicating that the switch 17 has been opened to prevent the building X from receiving utility power.

[0043] In some forms, a particular area of the building X may include multiple programmable interface modules 30. The arrangement of the programmable interface modules 30 within the building X may depend on the overall configuration of the building X as well as what is located inside the building X.

[0044] The generator controller 12 may prevent the generator 11 from supplying power when the programmable interface module 30 sends signals to the generator controller. In some forms, the generator 11 may continue to operate even though the programmable interface module 30 is sending signals to the generator controller 12 that indicate the presence of fire within the building X.

[0045] It should be noted that the generator controller 12 may include a power source (not shown) that supplies power to operate the programmable interface module 30. As an example, the power source may be a 12V direct current power source, although it should be noted that other sources for powering the programmable interface module 30 are contemplated.

[0046] In addition, the power source may be regulated by the generator controller 12. It should be noted that the generator controller 12 may regulate power to the programmable interface module 30 when there is loss of utility power source 1. Therefore, the loss of the utility power 1 may not affect operation of the programmable interface module 30.

[0047] In some forms of the power generation systems 10 described herein, the generator 11 and/or generator controller 12 may be configured to provide data relating to operation of the secondary power generation system 10 to a user U via a network. In some forms, the secondary power generation system 10 may further include a server 20 that is connected to the generator 11 and/or generator controller 12 via a network (e.g., the Internet I). It should be noted that the generator 11 and/or the generator controller 12 may be connected to the network in a hard-wired or wireless manner.

[0048] The generator 11 and/or generator controller 12 may be configured to exchange data with the server 20. As an example, the server 20 may provide notification to a user U indicating the presence of a fire 15 when the generator 11 and/or generator controller 12 provide data to the server 20 that one of the sensors 13A, 13B, 13C, 13D has detected fire